

ABSTRAK

Penelitian ini bertujuan untuk mengetahui gambaran beban kognitif siswa SMA berbasis pesantren khususnya pada pembelajaran biologi. Penelitian dilakukan secara deskriptif di salah satu SMA berbasis pesantren. Subjek penelitian terdiri atas 40 siswa dalam satu kelas XI IPA. Beban kognitif siswa yang diukur dalam penelitian ini adalah Kemampuan Menerima dan Mengolah Informasi (MMI), Usaha Mental (UM), dan Hasil Belajar (HB) siswa. MMI diukur dengan *worksheet* berisi pertanyaan-pertanyaan yang mengacu pada *task complexity*, UM diukur menggunakan kuisioner dengan skala *Likert*, dan HB dijarung dengan soal tes berdasarkan indikator penalaran dari Marzano. Hasil penelitian menunjukkan MMI siswa termasuk kategori ‘sedang’ (skor maksimal 3), UM siswa termasuk kategori ‘tidak kesulitan’ (skor maksimal 1), sedangkan hasil HB siswa termasuk kategori kurang (skor maksimal 100). Berdasarkan hasil perhitungan korelasi pada ketiga indikator pengukuran beban kognitif, hanya korelasi antara Usaha Mental (UM) dengan Hasil Belajar (HB) saja yang memiliki nilai signifikansi (nilai r negatif) yang menunjukkan bahwa penurunan UM pada siswa akan sangat berpengaruh terhadap meningkatnya HB. Akan tetapi hubungan antara MMI terhadap HB tidak signifikan yang berarti masih adanya beban kognitif yang dimiliki siswa SMA berbasis pesantren ketika proses pembelajaran di dalam kelas.

Kata kunci: beban kognitif, pembelajaran biologi, SMA berbasis pesantren

ABSTRACT

This research was aimed to draw cognitive load of students of pesantren-based senior high school (a kind of boarding school in Indonesia) especially in biology learning. This research used descriptive research on one of pesantren-based senior high school. Participants of this study were 40 students of eleventh grade senior high school. Students cognitive load be measured in this research are ability to receive and process information (MMI), mental effort (UM), and learning outcomes (HB). MMI be measured with worksheet which referred to task complexity, UM be measured with questionnaire used Likert scale, HB be measured with a test reasoning indicator-based from Marzano. The research result describe that MMI belong to the category of 'medium' (maximum score is 3), UM belong to the category of 'no difficulty' (maximum score is 1), and HB result belong to the category 'less' (maximum score is 100). Based on correlation result in three cognitive load components, only correlation between UM to HB which has significance value (value = r negative) which aims that UM decline in students will greatly affect the increase in HB. However, the correlation between MMI to HB is not significant, which means there is still the cognitive load of students based-boarding secondary school when learning process in the classroom.

Keywords: cognitive load, biology learning, Based-Boarding Secondary School